



325131

REFERENCE: 75

Elkhart Metal Distributing, Inc. MSDS sheets.

August 13, 2008, October 22, 2008. 49 pages

0001

ELKHART METAL DISTRIBUTING, INC.
JOHNSON TUBE & STEEL/C&J STEEL DISTRIBUTION

P. O. Box 207
3601 C.R. 6 East
Elkhart, IN 46514
U.S.A
Phone number (574) 266-8212
Fax number (574) 266-8272

SEND TO Company name IDEM	From John K. Martin
Attention Mark Jaworski	Date 8-13-2008
Office location	Office location
Fax number 317-234-0428	Phone number

☐ Urgent ☐ Reply ASAP ☐ Please comment ☐ Please review ☒ FYI

Total pages, including cover: 5

COMMENTS

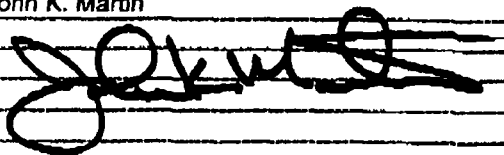
Dear Mark:

Attached are a copy of the label and the MSDS for the coolant that we use on all of our saws and on our rollformer.

Let me know if you need any additional information.

Thanks,

John K. Martin



CONFIDENTIALITY NOTICE:

This facsimile contains confidential information intended only for the use of the specific individual or entity named above.

Any unauthorized dissemination or copying of this facsimile or the information contained in it or attached thereto is strictly prohibited.

Reference: 75

0001 A

MICHIANA INDUST. LUB

GROSS WT.

458 LBS

208 KGS

NET WT.

418 LBS

190 KGS

TARE WT.

40 LBS

18 KGS

D.O. #

65

MILKPOOL 140 MAX

Q.A. # 0307 G

SOLUBLE OIL

PETROLEUM OIL

AADXX

PRECAUTIONS

Avoid contact with eyes, skin and clothing.
 Avoid breathing vapor, mist or spray.
 Do not take internally.
 Provide adequate ventilation.
 Wear chemical safety goggles, rubber gloves
 and respiratory protection where vapors, mist
 or spray may be generated.
 Wash thoroughly after handling.
 Remove contaminated clothing and launder
 before reuse.
 Avoid heat, sparks and open flames.
 USE ONLY AS DIRECTED

The data contained herein is for informational purposes only.
 No warranty or liability is expressed or implied.

FOR INDUSTRIAL USE ONLY!

FIRST AID:

EYES: Flush with large amounts of water for at least 15
 minutes holding eyelids apart. If irritation develops,
 contact a physician.

SKIN: Flush affected area thoroughly with water and
 soap. If irritation develops contact a physician.

INHALATION: Move to fresh air.

INGESTION: Contact a physician immediately.
 Do not induce vomiting.

Do not reuse empty containers as they may contain
 residual product (solids, liquids and/or vapors).

Do not use furniture, floor or wall on or near empty
 containers.

Read the Material Safety Data Sheet for further
 information.

HANDLING AND STORAGE
 Store in a cool, dry place away from direct sunlight.
 Keep container closed when not in use.

2502 1/2 MIDDLEBURY ST. ELKHART, INDIANA 46516

PHONE (574) 389-8811 TOLL FREE (877) 389-8811 FAX (574) 389-8877

FROM :

PHONE NO. :

Aug. 13 2008 09:14AM PZ

Michiana Industrial Lubricants Co.

57315 Nagy Drive • Elkhart, IN 46517
 PH: 219-389-8811 • FAX: 219-389-8877

Material Safety Data Sheet**Section 1 Product and Company Identification**

Michiana Industrial Lubricants Co.
 57315 Nagy Dr.
 Elkhart, IN 46517
 (219) 389-8811
 Fax (219) 389-8877

Emergency Phone Numbers
 CFB 219-848-5288 Normal Business Hrs.
 USA Chemtrec 800-424-9300 24 Hours
 International Chemtrec 703-527-3887

Product Name: MILKool 140AAX

Chemical Family: Straight Oil
 Prepared by: John Ray

Section 2 Composition / Hazardous Ingredients Information

Ingredient	WT %	TLV / PEL*	CAS #
Severely Hydrotreated Naphthenic Oil	60-68	5mg/m ³	64742-53-6

* This value applies to any oil which is misted into the air.

Section 3 Physical and Chemical Properties

Color: Dark Brown	Vapor Pressure: N/A °F	Solubility in Water: Complete
Appearance: Clear Liquid	% Volatile by Volume: N/A	Evaporation Rate
Odor: Characteristic	Vapor Density (air = 1): N/A	(Water = 1): >1
Boiling Point: >500°F	Reactivity in Water: Non-reactive	Specific Gravity: .918

Section 4 Fire Fighting Measures**Flammable Properties:**

Flash point: 310°F (ASTM D-36) Flammable limits in air: N/A Auto ignition temperature: N/A

Extinguishing media: CO₂, dry chemical, foam**Special fire fighting measure:**

Procedures for an oil fire should be followed. Use self contained breathing apparatus. Use foam or dry chemical to extinguish fire.
 Water may be used only to keep surrounding containers cool.

Section 5 Hazards Identification**Primary Routes of Entry:**

Skin: Tests on similar materials indicate that no significant adverse health effects are expected to occur with short term exposure.

Eyes: Tests on similar materials suggest that minimal irritation may occur on contact.

Ingestion: Tests on similar materials indicate no significant adverse effects expected. Practically non-toxic.

Inhalation: Tests on similar materials indicate no acute effects are expected.

0003

FROM :

PHONE NO. :

Aug. 13 2008 09:15AM P3

Section 6 First Aid Measures

Eyes: Flush eyes immediately with water for at least 15 minutes or until irritation subsides. If irritation persists, consult a physician.
Skin: Immediately remove soaked or contaminated clothing. Wash skin thoroughly with soap and water. Launder all contaminated clothing before reuse. If skin irritation or rash develops obtain medical assistance.
Ingestion: Product is practically non-toxic. Do not induce vomiting. Obtain emergency medical attention.
Inhalation: Not likely to occur except as a mist. Move to fresh air and provide oxygen if necessary. Obtain emergency medical attention.

Section 7 Personal Protection/ Exposure Controls

Engineering Controls: Use adequate ventilation to keep oil mists of this material below applicable standards.
Respiratory Protection: Not required if adequate ventilation. If occupational exposure limits are exceeded wear NIOSH approved apparatus.
Skin Protection: Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are polyvinyl chloride, neoprene, polyvinyl alcohol, nitrile, vitron.
Eye Protection: Glasses or goggles. Have suitable eye wash water available.
Other/General Protection: If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes.

Section 8 Handling and Storage

Handling and Storage Precautions: Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty containers can contain explosive vapors. NFPA Class IIIB storage.
Do not allow product to freeze. If product freezes allow product to thaw completely prior to use.
Work/Hygiene Practices: Wash thoroughly after handling. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleaners for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

Section 9 Accidental Release Measures

- Eliminate ignition sources.
- Absorb spillage with inert material.
- Contain spill and keep from entering waterways or sewers.
- Advise EPA/state agency if required.
- Use personal protective equipment.
- Shovel, sweep or vacuum spill.

Section 10 Toxicological Information

Acute Studies: Tests on similar materials show a low order of acute oral and dermal toxicity.
Eye Effects: Minimal irritation on contact.
Skin Effects: Practically non-toxic if absorbed. May cause mild irritation with prolonged and repeated contact.
Acute Oral Effects: Tests on similar materials indicate low order of acute oral toxicity.
Acute Inhalation Effects: Low acute toxicity expected on inhalation.

This product is not listed as a carcinogenic or a potential carcinogen by the National Toxicology Program, by the I.A.R.C. monographs or by OSHA.

Section 11 Stability and Reactivity

Stability: Stable Conditions to avoid: Sources of ignition. **Incompatibility:** Strong oxidizing or reducing agents.
Decomposition Products: Oxides of Carbon and Hydrogen. **Hazardous Polymerization:** Will not occur.

Section 12 Ecological Information

No Data available

FROM :

PHONE NO. :

Aug. 13 2008 09:16AM P4

Section 13 Disposal Considerations

Follow federal, state and local regulations. Not a RCRA hazardous waste if uncontaminated. If "used" RCRA criteria must be determined. Do not flush into drain/storm sewer use an authorized disposal service. If permitted incineration may be practical. Recommend recycling.

Section 14 Transportation Information

Proper Shipping Name: Lubricating Oils, N.O.S.

Shipping Class: 65

Dot Identification Number: N/A

Dot Shipping Label: Not regulated by DOT.

Section 15 Regulatory Status

U.S. Federal Regulatory Information:

SARA 302 Threshold Planning Quantity: N/A

SARA 304 Reportable Quantity: N/A

SARA 311 Categories:

Acute Health Effects: None

Chronic Health Effects: None

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactivity Hazard: No

EPA/TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

EPA Hazard Classification Code: Not applicable

CERCLA: No chemicals in this product are subject to the reporting requirements of CERCLA.

SARA Title III - Section 313 Supplier Notification: No chemicals in this product exceed the DE Minimum reporting level established by SARA Title III, Section 313 and 40 CFR 372.

WHMIS Classification: Not controlled.

Section 16 Other Information

NFPA Hazard Rating:

Health:	1	Slight
Flammability:	2	Slight
Reactivity:	0	Negligible

Supersedes MSDS Dated: 3/15/06

*Threshold Limit Value/Personal Exposure Limit

N/A = Not Applicable

N/E = Not Established

Disclaimer of Express or Implied Warranties

The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein and assume no responsibility regarding the suitability of this information for the user's intended purpose or for the consequence of its use. Each individual should make a determination as to the suitability of the information for his/her particular purpose(s).

0004A

**ELKHART METAL DISTRIBUTING, INC.
and JOHNSON TUBE & STEEL DIVISION****FAX COVER SHEET**

P. O. Box 207
23410 C.R. 8
Elkhart, IN 46514
U.S.A
Phone number (574) 266-8212
Fax number (574) 266-8272

SEND TO Company name	From John Martin
Attention Mark Jaworski	Date 10.22
Office location	Office location
Fax number 317-234-0428	Phone number

☐ Urgent ☐ Reply ASAP ☐ Please comment ☐ Please review ☐ For your information

Total pages, including cover:

44

COMMENTS

MSDS for following items:

- ① Port 140 AAX
- ② Conoco Hydro Spindle Clear 10
- ③ Citgo Hydraulic AW 32
- ④ Citgo Hydraulic AW 46
- ⑤ Mineral Spirits
- ⑥ Kendal 80W90 Gear Lub.

CONFIDENTIALITY NOTICE:

This facsimile contains confidential information intended only for the use of the specific individual or entity named above. Any unauthorized dissemination or copying of this facsimile or the information contained in it or attached thereto is strictly prohibited.

0005

Michiana Industrial Lubricants Co.

57315 Nagy Drive • Elkhart, IN 46517
PH: 219-389-8811 • FAX: 219-389-8877

Material Safety Data Sheet

Water Soluble Oil

Section 1 Product and Company Identification

Michiana Industrial Lubricants Co.
57315 Nagy Dr.
Elkhart, IN 46517
(219) 389-8811
Fax (219) 389-8877

Emergency Phone Numbers

CFB 219-848-5288 Normal Business Hrs.
USA Chemtrec 800-424-9300 24 Hours
International Chemtrec 703-527-3887

Product Name: MILKool 140AAX

Chemical Family: Straight Oil

Prepared by: John Ray

Section 2 Composition / Hazardous Ingredients Information

Ingredient	WT %	TLV / PEL*	CAS #
Severely Hydrotreated Naphthenic Oil	60-68	5mg/m ³	64742-53-6

* This value applies to any oil which is misted into the air.

Section 3 Physical and Chemical Properties

Color: Dark Brown	Vapor Pressure: N/A °F	Solubility in Water: Complete
Appearance: Clear Liquid	% Volatile by Volume: N/A	Evaporation Rate: (Water = 1): >1
Odor: Characteristic	Vapor Density (air = 1): N/A	Specific Gravity: .918
Boiling Point: >500° F	Reactivity in Water: Non-reactive	

Section 4 Fire Fighting Measures

Flammable Properties:

Flash point: 310°F (ASTM D-56) Flammable limits in air: N/A Auto ignition temperature: N/A

Extinguishing media: CO₂, dry chemical, foam

Special fire fighting measure:

Procedures for an oil fire should be followed. Use self contained breathing apparatus. Use foam or dry chemical to extinguish fire. Water may be used only to keep surrounding containers cool.

Section 5 Hazards Identification

Primary Routes of Entry:

Skin: Tests on similar materials indicate that no significant adverse health effects are expected to occur with short term exposure.

Eyes: Tests on similar materials suggests that minimal irritation may occur on contact.

Ingestion: Tests on similar materials indicate no significant adverse effects expected. Practically non-toxic.

Inhalation: Tests on similar materials indicate no acute effects are expected.

Section 6 First Aid Measures

Eyes: Flush eyes immediately with water for at least 15 minutes or until irritation subsides. If irritation persists, consult a physician.
In: Immediately remove soaked or contaminated clothing. Wash skin thoroughly with soap and water. Launder all contaminated clothing before reuse. If skin irritation or rash develops obtain medical assistance.
Ingestion: Product is practically non-toxic. Do not induce vomiting. Obtain emergency medical attention.
Inhalation: Not likely to occur except as a mist. Move to fresh air and provide oxygen if necessary. Obtain emergency medical attention.

Section 7 Personal Protection/ Exposure Controls

Engineering Controls: Use adequate ventilation to keep oil mists of this material below applicable standards.
Respiratory Protection: Not required if adequate ventilation. If occupational exposure limits are exceeded wear NIOSH approved apparatus.
Skin Protection: Avoid prolonged and/or repeated skin contact. If prolonged contact cannot be avoided, wear protective impervious gloves and clothing. Acceptable materials for gloves are polyvinyl chloride; neoprene; polyvinyl alcohol; nitrile; vitron.
Eye Protection: Glasses or goggles. Have suitable eye wash water available.
Other/General Protection: If there is a likelihood of splashing, an oil resistant clothing should be worn. Never wear oil soaked clothing. Launder or dry clean before wearing. Discard oil soaked shoes.

Section 8 Handling and Storage

Handling and Storage Precautions: Keep away from flames, sparks or hot surfaces. Never use a torch to cut or weld on or near container. Empty containers can contain explosive vapors. NFPA Class IIIB storage.
Do not allow product to freeze. If product freezes allow product to thaw completely prior to use.
Work/Hygienic Practices: Wash thoroughly after handling. Do not use gasoline, solvents, kerosene, or harsh abrasive skin cleansers for washing exposed skin areas. Take a shower after work if general contact occurs. Remove oil-soaked clothing and launder before reuse. Launder or discard contaminated shoes and leather gloves.

Section 9 Accidental Release Measures

- Eliminate ignition sources.
- Absorb spillage with inert material.
- Contain spill and keep from entering waterways or sewers.
- Advise EPA/state agency if required.
- Use personal protective equipment.
- Shovel, sweep or vacuum spill.

Section 10 Toxicological Information

Acute Studies: Tests on similar materials show a low order of acute oral and dermal toxicity.
Eye Effects: Minimal irritation on contact.
Skin Effects: Practically non-toxic if absorbed. May cause mild irritation with prolonged and repeated contact.
Acute Oral Effects: Tests on similar materials indicate low order of acute oral toxicity.
Acute Inhalation Effects: Low acute toxicity expected on inhalation.

This product is not listed as a carcinogenic or a potential carcinogen by the National Toxicology Program, by the I.A.R.C. monographs or by OSHA.

Section 11 Stability and Reactivity

Stability: Stable Conditions to avoid: Sources of ignition. **Incompatibility:** Strong oxidizing or reducing agents.
Decomposition Products: Oxides of Carbon and Hydrogen. **Hazardous Polymerization:** Will not occur.

Section 12 Ecological Information

Data available

Section 13 Disposal Considerations

Follow federal, state and local regulations. Not a RCRA hazardous waste if uncontaminated. If "used" RCRA criteria must be determined. Do not flush into drain/storm sewer use an authorized disposal service. If permitted incineration may be practical. Recommend recycling.

Section 14 Transportation Information

Proper Shipping Name: Lubricating Oils, N.O.S.

Shipping Class: 65

Dot Identification Number: N/A

Dot Shipping Label: Not regulated by DOT.

Section 15 Regulatory Status

U.S. Federal Regulatory Information:

SARA 302 Threshold Planning Quantity: N/A

SARA 304 Reportable Quantity: N/A

SARA 311 Categories:

Acute Health Effects: None

Chronic Health Effects: None

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactivity Hazard: No

TSCA Inventory: The components of this product are listed on the EPA/TSCA inventory of chemicals.

EPA Hazard Classification Code: Not applicable

CERCLA: No chemicals in this product are subject to the reporting requirements of CERCLA.

SARA Title III - Section 313 Supplier Notification: No Chemicals in this product exceed the DE Minimum reporting level established by SARA Title III, Section 313 and 40 CFR 372.

WHMIS Classification: Not controlled.

Section 16 Other Information

NFPA Hazard Rating:

Health	1	Slight
Flammability	1	Slight
Reactivity	0	Negligible

Supersedes MSDS Dated: 3/15/06

*Threshold Limit Value/Personal Exposure Limit

N/A = Not Applicable

N/E = Not Established

Disclaimer of Express or Implied Warranties

The information contained herein is based upon data believed to be reliable and reflects our best professional judgment. Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein and assume no responsibility regarding the suitability of this information for the user's intended purpose or for the consequence of its use. Each individual should make a determination as to the suitability of information for his/her particular purpose(s).

MSDS Code: 775693
Status: Final

COSPINIO
Page *775693*
Date of Issue: 14-Oct-2004



MATERIAL SAFETY DATA SHEET

Hydroclear® (Ultra Clean) Spindle Oil

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Hydroclear® (Ultra Clean) Spindle Oil
Intended Use: Circulating Oil
Synonyms: Hydroclear® Ultra Clean Spindle Oil 2
Hydroclear® Ultra Clean Spindle Oil 6
Hydroclear® Ultra Clean Spindle Oil 10
Hydroclear® Ultra Clean Spindle Oil 22
Hydroclear® Spindle Oil 2
Hydroclear® Spindle Oil 6
Hydroclear® Spindle Oil 10
Hydroclear® Spindle Oil 22

Responsible Party: Conoco Lubricants
A Division of ConocoPhillips
600 N. Dairy Ashford
Houston, Texas
77079-1175

Customer Service: 800-640-1956
Technical Information: 800-265-9556

The intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW

24 Hour Emergency Telephone Numbers:
Spill, Leak, Fire or Accident Call CHEMTREC:
North America: (800) 424-9300
Others: (703) 527-3887 (collect)

California Poison Control System: (800) 358-3219

Health Hazards/Precautionary Measures: Aspiration hazard if swallowed. Can enter lungs and cause damage. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not taste or swallow.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance: Clear and bright
Physical Form: Liquid
Odor: Characteristic petroleum

NFPA 704 Hazard Class:

Health: 1 (Slight)
Flammability: 1 (Slight)
Instability: 0 (Least)

HMS Hazard Class:

Health: 1 (Slight)
Flammability: 1 (Slight)
Physical Hazards: 0 (Least)

MSDS Code: 775693
Status: Final

Page 2/7
Date of Issue: 14-Oct-2004

2. COMPOSITION / INFORMATION ON INGREDIENTS

NON-HAZARDOUS COMPONENTS					
Component / CAS No:	Percent (%)	ACGIH:	OSHA:	NIOSH:	Other:
Additives	1 - 2	NE	NE	NE	NE
PROPRIETARY					
Lubricant Base Oil (Petroleum)	98 - 99	5mg/m ³ TWA 10 mg/m ³ STEL	5 mg/m ³ TWA	2500 mg/m ³ IDLH	as Oil Mist, if Generated
VARIOUS					5 mg/m ³ NOHSC TWA

All components are listed on the TSCA inventory.

The base oil for this product can be a mixture of any of the following highly refined petroleum streams: CAS 84741-88-4; CAS 84741-89-5; CAS 84741-86-4; CAS 84741-87-5; CAS 84742-01-4; CAS 84742-52-8; CAS 84742-53-6; CAS 84742-84-7; CAS 84742-55-8; CAS 84742-86-9; CAS 84742-57-0; CAS 84742-82-7; CAS 84742-83-8; CAS 84742-85-0; CAS 72623-83-7; CAS 72623-85-9; CAS 72623-88-0; CAS 72623-87-1

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

1%=10,000 PPM
NE=Not Established

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion (Swallowing): No harmful effects expected from ingestion. **ASPIRATION HAZARD** - This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

Signs and Symptoms: Effects of overexposure may include nausea, diarrhea, irritation of the digestive tract, irritation of the nose and throat.

Cancer: Inadequate evidence available to evaluate the cancer hazard of this material. See Section 11 for carcinogenicity information of individual components, if any.

Target Organs: No data available for this material.

Developmental: No data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

MSDS Code: 775683

Page 3/7

Status: Final

Date of Issue: 14-Oct-2004

4. FIRST AID MEASURES

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If victim is drowsy or unconscious and vomiting, place on the left side with the head down. If possible, do not leave victim unattended and observe closely for adequacy of breathing. Seek medical attention.

Notes to Physician: High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

5. FIRE-FIGHTING MEASURES

Flammable Properties:

Flash Point:	300-338° F / 105-170° C (COC)
OSHA Flammability Class:	Not regulated
NFPA Flammability Class:	No data
LEL%:	No data
UEL%:	No data
Autoignition Temperature:	No data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release.

Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

MSDS Code: 775693
Status: Final

Page 4/7
Date of Issue: 14-Oct-2004

7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4278 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional engineering controls may be required.

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a NIOSH approved self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode if there is potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z89.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact and possible irritation (see manufacturers literature for information on permeability).

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

Suggestions for the use of specific protective materials are based on readily available published data. Users should check with specific manufacturers to confirm the performance of their products.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance:
Physical Form:
Odor:
Odor Threshold:
pH:

Clear and bright
Liquid
Characteristic petroleum
No data
Not applicable

MSDS Code: 775693
Status: Final

Page 5/7
Date of Issue: 14-Oct-2004

Vapor Pressure (mm Hg):	<1
Vapor Density (air=1):	>1
Boiling Point:	No data
Melting/Freezing Point:	< -20°C
Solubility in Water:	Negligible
Partition Coefficient (n-octanol/water):	No data
Specific Gravity:	0.80-0.88
Bulk Density:	6.7-7.2
Bulk Density Units:	lbs/gal
Viscosity cSt @ 100°C:	1.0-4.5
Viscosity cSt @ 40°C:	1.8-24
Evaporation Rate (nBuAc=1):	<1
Flash Point:	300-338° F / 105-170° C
Test Method:	(COC)
LEL%:	No data
UEL%:	No data
Autoignition Temperature:	No data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions to Avoid: Extended exposure to high temperatures can cause decomposition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents, strong acids, strong bases.

Hazardous Decomposition Products: Combustion can yield carbon, nitrogen and sulfur oxides.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Chronic Data:

Lubricant Base Oil (Petroleum) - CAS: VARIOUS

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating, and dewaxing to remove aromatics and improve performance characteristics. All of the oils meet the IP-346 criteria of less than 3 percent PAH's and therefore none are listed as a carcinogen by NTP, IARC, or OSHA.

Acute Data:

Additives - CAS: PROPRIETARY

Dermal LD50 = No information available

LC50 = No information available

Oral LD50 = No information available

Lubricant Base Oil (Petroleum) - CAS: VARIOUS

Dermal LD50 = >2 g/kg

LC50 = No information available

Oral LD50 = >5 g/kg

12. ECOLOGICAL INFORMATION

Not evaluated at this time.

MSDS Code: 775893
Status: Final

Page 6/7
Date of Issue: 14-Oct-2004

13. DISPOSAL CONSIDERATIONS

This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

Contents should be completely used and containers emptied prior to discard. Residue may be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or a drum reconditioner. To assure proper disposal of small empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Not classified as hazardous

Note: Material is unregulated unless in container of 3500 gallons or more, then provisions of 49 CFR Part 130 apply for land shipment.

IMDG Shipping Description: Not regulated

ICAO/IATA Shipping Description: Not regulated

15. REGULATORY INFORMATION

U.S. Regulations:

EPA SARA 311/312 (Title III Hazard Categories)

Acute Health:	No
Chronic Health:	No
Fire Hazard:	No
Pressure Hazard:	No
Reactive Hazard:	No

SARA - Section 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

--None Known--

EPA (CERCLA) Reportable Quantity (in pounds):

--None Known--

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPOs (in pounds):

This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:

-- None Known --

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

-- None Known --

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

TSCA:

All components are listed on the TSCA inventory.

International Regulations:

MSDS Code: 775693
Status: Final

Page 7/7
Date of Issue: 14-Oct-2004

Canadian Regulations:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Domestic Substances List: Listed
WHMIS Classification: Not regulated

16. OTHER INFORMATION

Issue Date: 14-Oct-2004
Previous Issue Date: 05-Oct-2001
Reason for revision: Changed responsible party from Conoco to ConocoPhillips. Other formatting changes
MSDS Code: 775693

Disclaimer of Expressed and implied Warranties:

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.



CITGO A/W Hydraulic Oil 32

Material Safety Data Sheet

CITGO Petroleum Corporation
P.O. Box 4689
Houston, TX 77210

MSDS No. 633415001
Revision Date 3/10/2006

IMPORTANT: Prepared in accordance with 29 CFR 1910.1200. Read this MSDS before handling or disposing of this product and pass this information on to employees, customers and users of this product.

Emergency Overview

Physical State Liquid.

Color Light amber to amber **Odor** Mild petroleum odor

WARNING:

Oil injected into the skin from high-pressure leaks can cause severe injury.

Most damage occurs during the first few hours.

Seek medical attention immediately.

Surgical removal of oil may be necessary.

Spills may create a slipping hazard.

Hazard Rankings

	HMIS	NFPA
Health Hazard	1	0
Fire Hazard	1	1
Reactivity	0	0

* = Chronic Health Hazard

Protective Equipment

Minimum Recommended
See Section 8 for Details



SECTION 1. PRODUCT IDENTIFICATION

Trade Name	CITGO A/W Hydraulic Oil 32	Technical Contact	(800) 248-4884
Product Number	633415001	Medical Emergency	(832) 486-4700
CAS Number	Mixture.	CHEMTREC Emergency	(800) 424-9300
		(United States Only)	
Product Family	Hydraulic oil		
Synonyms	Hydraulic oil; CITGO® Material Code No.: 633415001		

SECTION 2. COMPOSITION

Highly-refined petroleum lubricant oils, (CAS No.: Mixture), Conc. 98 to 100

The concentrations of the individual base oils will vary. The individual concentration ranges are as follows:

Distillates, petroleum, hydrotreated heavy paraffinic, (CAS No. 64742-54-7) Conc. 0 - 100%;

Distillates, petroleum, solvent-refined heavy paraffinic (CAS No. 64741-88-4) Conc. 0 - 100%;

Distillates, petroleum, solvent-refined light paraffinic (CAS No. 84741-89-5) Conc. 0 - 50%

Component Name(s)	CAS Registry No.	Concentration (%)
Zinc and zinc compounds	68849-42-3	<1
Proprietary Ingredients	Proprietary Mixture	<1

SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact.

Signs and Symptoms of Acute Exposure

CITGO A/W Hydraulic Oil 32

Inhalation	At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs.
Eye Contact	This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.
Skin Contact	This material can cause mild skin irritation from prolonged or repeated skin contact. Injection under the skin can cause inflammation and swelling. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage. Initial symptoms may be minor. Injection of petroleum hydrocarbons requires immediate medical attention.
Ingestion	If swallowed, large volumes of material can cause generalized depression, headache, drowsiness, nausea, vomiting and diarrhea. Smaller doses can cause a laxative effect. If aspirated into the lungs, liquid can cause lung damage.
Chronic Health Effects Summary	This product contains a petroleum-based mineral oil. Prolonged or repeated skin contact can cause mild irritation and inflammation characterized by drying, cracking, (dermatitis) or oil acne. Repeated or prolonged inhalation of petroleum-based mineral oil mists at concentrations above applicable workplace exposure levels can cause respiratory irritation or other pulmonary effects.
Conditions Aggravated by Exposure	Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin
Target Organs	May cause damage to the following organs: skin.
Carcinogenic Potential	This product is not known to contain any components at concentrations above 0.1% which are considered carcinogenic by OSHA, IARC or NTP.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification				OSHA Physical Hazard Classification					
Irritant	<input type="checkbox"/>	Sensitizer	<input type="checkbox"/>	Combustible	<input type="checkbox"/>	Explosive	<input type="checkbox"/>	Pyrophoric	<input type="checkbox"/>
Toxic	<input type="checkbox"/>	Highly Toxic	<input type="checkbox"/>	Flammable	<input type="checkbox"/>	Oxidizer	<input type="checkbox"/>	Water-reactive	<input type="checkbox"/>
Corrosive	<input type="checkbox"/>	Carcinogenic	<input type="checkbox"/>	Compressed Gas	<input type="checkbox"/>	Organic Peroxide	<input type="checkbox"/>	Unstable	<input type="checkbox"/>

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation	Move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately. Keep the affected individual warm and at rest.
Eye Contact	Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. Seek medical attention if excessive tearing, redness, or pain persists.
Skin Contact	If burned by hot material, cool skin by quenching with large amounts of cool water. For contact with product at ambient temperatures, remove contaminated shoes and clothing. Wipe off excess material. Wash exposed skin with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists. Thoroughly clean contaminated clothing before reuse. Discard contaminated leather goods. If material is injected under the skin, seek medical attention immediately.

CITGO A/W Hydraulic Oil 32

Ingestion Do not induce vomiting unless directed to by a physician. Do not give anything to drink unless directed to by a physician. Never give anything by mouth to a person who is not fully conscious. Seek medical attention immediately.

Notes to Physician SKIN: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

INGESTION: The viscosity range of the product(s) represented by this MSDS is greater than 100 SUS at 100°F. There is a low risk of aspiration upon ingestion. Careful gastric lavage or emesis may be considered to evacuate large quantities of material.

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification NFPA Class-IIIB combustible material.

Flash Point Open cup; 212°C (414°F) (Cleveland.).

Lower Flammable Limit No data. **Upper Flammable Limit** No data.

Autoignition Temperature Not available.

Hazardous Combustion Products Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and trace oxides of sulfur, phosphorus, zinc and/or nitrogen.

Special Properties This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.

Extinguishing Media Use dry chemical, foam, Carbon Dioxide or water fog. Water or foam may cause frothing. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

Protection of Fire Fighters Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

CITGO A/W Hydraulic Oil 32

SECTION 7. HANDLING AND STORAGE

Handling	Avoid contamination and extreme temperatures to minimize product degradation. Empty containers may contain product residues that can ignite with explosive force. Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.
Storage	Keep container closed. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.
Personal Protective Equipment	Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



Eye Protection	Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.
Hand Protection	Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.
Body Protection	Use clean protective clothing if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated clothing before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.
Respiratory Protection	The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

CITGO AW Hydraulic Oil 32

General Comments Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Oil Mist, Mineral	ACGIH (United States). TWA: 5 mg/m ³ STEL: 10 mg/m ³ OSHA (United States). TWA: 5 mg/m ³

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid.	Color	Light amber to amber	Odor	Mild petroleum odor
Specific Gravity	0.87 (Water = 1)	pH	Not Applicable.	Vapor Density	>1 (Air = 1)
Boiling Range	Not available.			Melting/Freezing Point	Not available.
Vapor Pressure	<0.001 kPa (<0.01 mm Hg) (at 20°C)			Volatility	Negligible volatility.
Solubility in Water	Negligible solubility in cold water.			Viscosity (cSt @ 40°C)	33
Flash Point	Open cup: 212°C (414°F) (Cleveland.).				
Additional Properties	Gravity, °API (ASTM D287) = 31.3 @ 60° F Density = 7.42 Lbs/gal. Viscosity (ASTM D2161) = 170 SUS @ 100° F				

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable.	Hazardous Polymerization	Not expected to occur.
Conditions to Avoid	Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.		
Materials Incompatibility	Strong oxidizers.		
Hazardous Decomposition Products	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

CITGO AWW Hydraulic Oil 32

Toxicity Data

Distillates, petroleum, solvent-refined heavy paraffinic:

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested. Analyses conducted by method IP 346 indicate that the concentration of DMSO extractables in this mineral oil is below 3.0 weight percent.

Distillates, petroleum, hydrotreated heavy paraffinic:

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

Distillates, petroleum, solvent-refined light paraffinic:

ORAL (LD50): Acute: >5000 mg/kg [Rat].
DERMAL (LD50): Acute: >2000 mg/kg [Rabbit].

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested. Analyses conducted by method IP 346 indicate that the concentration of DMSO extractables in this mineral oil is below 3.0 weight percent.

Hydraulic oil:

Repeated or prolonged skin contact with certain hydraulic oils can cause mild skin irritation characterized by drying, cracking (dermatitis) or oil acne. Injection under the skin, in muscle or into the blood stream can cause irritation, inflammation, swelling, fever, and systemic effects, including mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental Fate

CITGO A/W Hydraulic Oil 32

An environmental fate analysis is not available for this specific product. Plants and animals may experience harmful or fatal effects when coated with petroleum products. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment. This material contains phosphorus which is a controlled element for disposal in effluent waters in most sections of North America. Phosphorus is known to enhance the formation of algae. Severe algae growth can reduce oxygen content in the water possibly below levels necessary to support marine life.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status Not regulated by the U.S. Department of Transportation as a hazardous material.

Proper Shipping Name Not regulated.

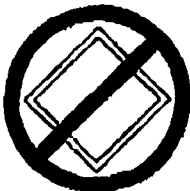
Hazard Class Not regulated.

Packing Group(s) Not applicable.

UN/NA Number Not regulated.

Reportable Quantity A Reportable Quantity (RQ) has not been established for this material.

Placard(s)



Emergency Response Guide No.

Not applicable.

MARPOL III Status

Not a DOT "Marine Pollutant" per 49 CFR 171.8.

CITGO A/W Hydraulic Oil 32

SECTION 15. REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) Inventory.
SARA 302/304 Emergency Planning and Notification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: No SARA 311/312 hazard categories identified.
SARA 313 Toxic Chemical Notification and Release Reporting	This product contains the following components in concentrations above <i>de minimis</i> levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Zinc and Zinc Compounds, Concentration: <1%
Clean Water Act (CWA)	This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
California Proposition 65	This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Toluene: <0.002% Ethyl acrylate: <0.0005%
New Jersey Right-to-Know Label	Petroleum Oil (Hydraulic Oil)
Additional Remarks	No additional regulatory remarks.

SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HHS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number 4.1
Revision Date 3/10/2006
Print Date Printed on 3/10/2006.

ABBREVIATIONS

CITGO A/W Hydraulic Oil 32

AP: Approximately EQ: Equal >: Greater Than <: Less Than NA: Not Applicable ND: No Data NE: Not Established
ACGIH: American Conference of Governmental Industrial Hygienists AIHA: American Industrial Hygiene Association
IARC: International Agency for Research on Cancer NTP: National Toxicology Program
NIOSH: National Institute of Occupational Safety and Health OSHA: Occupational Safety and Health Administration
NPCA: National Paint and Coating Manufacturers Association HMIS: Hazardous Materials Information System
NFPA: National Fire Protection Association EPA: US Environmental Protection Agency

DISCLAIMER OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

***** END OF MSDS *****

CITGO 116



CITGO A/W Hydraulic Oil 46

Material Safety Data Sheet

CITGO Petroleum Corporation
P.O. Box 4689
Houston, TX 77210

MSDS No. 633420001
Revision Date 9/17/2008

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Emergency Overview

Physical State Liquid.
Color Light amber Odor Mild petroleum odor

WARNING:

Oil injected into the skin from high-pressure leaks can cause severe injury.

Most damage occurs during the first few hours.

Seek medical attention immediately.

Surgical removal of oil may be necessary.

Spills may create a slipping hazard.

Hazard Rankings

	HMIS	NFPA
Health Hazard	1	0
Fire Hazard	1	1
Reactivity	0	0

* = Chronic Health Hazard

Protective Equipment

Minimum Recommended
See Section 8 for Details



SECTION 1. PRODUCT IDENTIFICATION

Trade Name	CITGO A/W Hydraulic Oil 46	Technical Contact	(800) 248-4684
Product Number	633420001	Medical Emergency	(832) 486-4700
CAS Number	Mixture.	CHEMTREC Emergency (United States Only)	(800) 424-9300
Product Family	Hydraulic oil		
Synonyms	Hydraulic oil; CITGO® Material Code: 633420001		

SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Highly-refined petroleum lubricant oils	Various	60 - 100
Zinc and zinc compounds	Proprietary	<1
Proprietary Ingredients	Proprietary Mixture	<1

SECTION 3. HAZARDS IDENTIFICATION

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact.

Signs and Symptoms of Acute Exposure

Inhalation	At elevated temperatures or in enclosed spaces, product mist or vapors may irritate the mucous membranes of the nose, the throat, bronchi, and lungs.
Eye Contact	This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.

CITGO AW Hydraulic Oil 46**Notes to Physician**

SKIN: In the event of injection in underlying tissue, immediate treatment should include extensive incision, debridement and saline irrigation. Inadequate treatment can result in ischemia and gangrene. Early symptoms may be minimal.

INGESTION: The viscosity range of the product(s) represented by this MSDS is greater than 100 SUS at 100°F. Careful gastric lavage may be considered to evacuate large quantities of material.

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification	NFPA Class-III-B combustible material.		
Flash Point	Open cup: 220°C (428°F) (Cleveland.).		
Lower Flammable Limit	No data.	Upper Flammable Limit	No data.
Autoignition Temperature	Not available.		
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/or nitrogen.		
Special Properties	This material can burn but will not readily ignite. This material will release vapors when heated above the flash point temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flash point.		
Extinguishing Media	Use dry chemical, foam, carbon dioxide or water fog. Water or foam may cause frothing. Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.		
Protection of Fire Fighters	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.		

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Do not touch damaged containers or spilled material unless wearing appropriate protective equipment. Slipping hazard; do not walk through spilled material. Stop leak if you can do so without risk. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. Prevent entry into waterways or sewers. In urban area, cleanup spill as soon as possible. In natural environments, seek cleanup advice from specialists to minimize physical habitat damage. This material will float on water. Absorbent pads and similar materials can be used. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE

Handling	Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Avoid contact with oxidizing agents. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Avoid contamination and extreme temperatures.
	Empty containers may contain product residues that can ignite with explosive force. Drain and purge equipment, as necessary, to remove material residues. Follow proper entry procedures, including compliance with 29 CFR 1910.146 prior to entering confined spaces such as tanks or pits. Use appropriate respiratory protection when concentrations exceed any

CITGO A/W Hydraulic Oil 46

established occupational exposure level (See Section 8). Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

Do not pressurize, cut, weld, braze solder, drill, grind or expose containers to flames, sparks, heat or other potential ignition sources. Protect containers against physical damage. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage

Keep container tightly closed. Store in a cool, dry, well-ventilated area. Store only in approved containers. Do not store with strong oxidizing agents. Do not store at elevated temperatures. Avoid storing product in direct sunlight for extended periods of time. Storage area must meet OSHA requirements and applicable fire codes. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of mists and/or vapors below the recommended exposure limits (see below). An eye wash station and safety shower should be located near the work-station.

Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.



Eye Protection

Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Wear goggles if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.

Hand Protection

None required for incidental contact. Use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.

Body Protection

Use clean protective clothing if splashing or spraying conditions are present. Protective clothing may include long-sleeve outer garment, apron, or lab coat. If significant contact occurs, remove oil-contaminated clothing as soon as possible and promptly shower. Launder contaminated clothing before reuse or discard. Wear heat protective boots and protective clothing when handling material at elevated temperatures.

Respiratory Protection

The need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).

General Comments

Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners. Since specific exposure standards/control limits have not been established for this product, the "Oil Mist, Mineral" exposure limits shown below are suggested as minimum control guidelines.

Occupational Exposure Guidelines

Substance

Applicable Workplace Exposure Levels

CITGO A/W Hydraulic Oil 46

Oil Mist, Mineral

ACGIH (United States).
TWA: 5 mg/m³
STEL: 10 mg/m³
OSHA (United States).
TWA: 5 mg/m³

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid.	Color	Light amber	Odor	Mild petroleum odor
Specific Gravity	0.87 (Water = 1)	pH	Not applicable	Vapor Density	>1 (Air = 1)
Boiling Range	Not available.			Melting/Freezing Point	Not available.
Vapor Pressure	<0.001 kPa (<0.01 mm Hg) (at 20°C)			Volatility	Negligible volatility.
Solubility in Water	Negligible solubility in cold water.			Viscosity (cSt @ 40°C)	47
Flash Point	Open cup: 220°C (428°F) (Cleveland.).				
Additional Properties	Gravity, °API (ASTM D287) = 30.4 @ 60° F Density = 7.28 Lbs/gal. Viscosity (ASTM D2161) = 240 SUS @ 100° F				

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable.	Hazardous Polymerization	Not expected to occur.
Conditions to Avoid	Keep away from extreme heat, sparks, open flame, and strongly oxidizing conditions.		
Materials Incompatibility	Strong oxidizers.		
Hazardous Decomposition Products	No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this MSDS.		

SECTION 11. TOXICOLOGICAL INFORMATION

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 3 of this MSDS.

Toxicity Data	Highly-refined petroleum lubricant oils	
	ORAL (LD50):	Acute: >5000 mg/kg (Rat).
	DERMAL (LD50):	Acute: >2000 mg/kg (Rabbit).

Mineral oil mists derived from highly refined oils are reported to have low acute and sub-acute toxicities in animals. Effects from single and short-term repeated exposures to high concentrations of mineral oil mists well above applicable workplace exposure levels include lung inflammatory reaction, lipoid granuloma formation and lipoid pneumonia. In acute and sub-acute studies involving exposures to lower concentrations of mineral oil mists at or near current work place exposure levels produced no significant toxicological effects. In long term studies (up to two years) no carcinogenic effects have been reported in any animal species tested.

Hydraulic oil

Repeated or prolonged skin contact with certain hydraulic oils can cause mild skin irritation characterized by drying, cracking (dermatitis) or oil acne. Injection under the skin, in muscle or into the blood stream can cause irritation, inflammation, swelling, fever, and systemic

CITGO A/W Hydraulic Oil 46

effects, including mild central nervous system depression. Injection of pressurized hydrocarbons can cause severe, permanent tissue damage.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity Analysis for ecological effects has not been conducted on this product. However, if spilled, this product and any contaminated soil or water may be harmful to human, animal, and aquatic life. Also, the coating action associated with petroleum and petroleum products can be harmful or fatal to aquatic life and waterfowl.

Environmental Fate Biodegradability: Inherently biodegradable in aerobic conditions.

Partition Coefficient (log Kow): >6 (based on similar materials)

Photodegradation: Based on similar materials, this product will have little or no tendency to partition to air. Hydrocarbons from this product which do partition to air are expected to rapidly photodegrade.

Stability in Water: Not readily susceptible to hydrolysis under aquatic conditions.

Distribution: Principally to soil and sediment. Petroleum-based (mineral) lubricating oils normally will float on water. In stagnant or slow-flowing waterways, an oil layer can cover a large surface area. As a result, this oil layer might limit or eliminate natural atmospheric oxygen transport into the water. With time, if not removed, oxygen depletion in the waterway may be sufficient to cause a fish kill or create an anaerobic environment.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a "hazardous waste" at the time of disposal. Transportation, treatment, storage, and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues. Empty drums and pails retain residue. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose this product's empty container to heat, flame, or other ignition sources. DO NOT attempt to clean it. Empty drums and pails should be drained completely, properly bunged or sealed, and promptly sent to a reconditioner.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

US DOT Status Not regulated by the U.S. Department of Transportation as a hazardous material.

Proper Shipping Name Not regulated.

Hazard Class Not regulated.

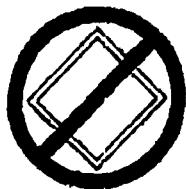
Packing Group Not applicable.

UN/NA Number Not regulated.

Reportable Quantity A Reportable Quantity (RQ) has not been established for this material.

Placard(s)

CITGO A/W Hydraulic Oil 46



Emergency Response
Guide No.

Not applicable.

MARPOL III Status

Not a DOT "Marine
Pollutant" per 49 CFR
171.8.

Oil; The product(s) represented by this MSDS is (are) regulated as "oil" under 49 CFR Part 130. Shipments by rail or highway in packaging having a capacity of 3500 gallons or more or in a quantity greater 42,000 gallons are subject to these requirements. In addition, mixtures containing 10% or more of this product may be subject to these requirements.

SECTION 15. REGULATORY INFORMATION

TSCA Inventory	This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.
SARA 302/304 Emergency Planning and Notification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.
SARA 311/312 Hazard Identification	The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories: No SARA 311/312 hazard categories identified.
SARA 313 Toxic Chemical Notification and Release Reporting	This product contains the following components in concentrations above <i>de minimis</i> levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA: No components were identified.
CERCLA	The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQ's) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this statute are: Zinc and Zinc Compounds, Concentration: <1%
Clean Water Act (CWA)	This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.
California Proposition 65	This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5): Toluene: <0.001% Ethyl acrylate: <0.0006%
New Jersey Right-to-Know Label	Petroleum Oil (Hydraulic Oil)
Additional Remarks	No additional regulatory remarks.

CITGO A/W Hydraulic Oil 46

SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number 4.0
Revision Date 9/17/2008

ABBREVIATIONS

AP: Approximately EQ: Equal >: Greater Than <: Less Than
NA: Not Applicable ND: No Data NE: Not Established

ACGIH: American Conference of Governmental Industrial Hygienists

AHA: American Industrial Hygiene Association

IARC: International Agency for Research on Cancer

NIOSH: National Institute of Occupational Safety and Health

NPMA: National Paint and Coating Manufacturers Association

EPA: US Environmental Protection Agency

HMIS: Hazardous Materials Information System

OSHA: Occupational Safety and Health Administration

NTP: National Toxicology Program

NFPA: National Fire Protection Association

DISCLAIMER OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

***** END OF MSDS *****



Regular Mineral Spirits (RMS)

RADCHEM PRODUCTS, INC.

Material Safety Data Sheet

PH: (630) 543-9900

CITGO Petroleum Corporation

MSDS No. 19015

Revision Date 6/20/2007

IMPORTANT: This MSDS is prepared in accordance with 29 CFR 1910.1200. Read this MSDS before transporting, handling, storing or disposing of this product and forward this information to employees, customers and users of this product.

Emergency Overview

Physical State: Liquid,
Color: Transparent, colorless. **Odor:** Characteristic hydrocarbon solvent odor.

CAUTION:
Combustible liquid and vapor.
Harmful or fatal if swallowed - Can enter lungs and cause damage.
Can cause eye, skin or respiratory tract irritation.
Harmful to aquatic organisms.

Hazard Rankings

	HMS	NFPA
Health Hazard	1	1
Fire Hazard	2	2
Reactivity	0	0

* = Chronic Health Hazard

Protective Equipment

Minimum Recommended
See Section 8 for Details



SECTION 1. PRODUCT IDENTIFICATION

Trade Name Regular Mineral Spirits (RMS)

Product Number 19015

CAS Number 8052-41-3

CHEMTREC Emergency
(United States Only)

(800) 424-9300

Product Family Petroleum hydrocarbon solvent

Synonyms Petroleum hydrocarbon solvent;
Mineral Spirits; Type 1B Mineral Spirits (meets ASTM D-235 Type 1B specifications);
Stoddard Solvent;
CITGO® Material Code: 19015

SECTION 2. COMPOSITION

This product may be composed, in whole or in part, of any of the following refinery streams:

Stoddard Solvent [CAS No.: 8052-41-3]

Heavy hydrodesulfurized naphtha (petroleum) [CAS No.: 64742-82-1]

This product contains the following chemicals as components of the refinery streams listed above:

Component Name(s)	CAS Registry No.	Concentration (%)
Ethylmethylbenzene, all isomers	25550-14-8	0.5
Trimethylbenzene, all isomers	25551-13-7	0.5
Xylene, all isomers	1330-20-7	0.5
Cumene	96-02-8	0.1
n-Propylbenzene	103-68-7	0.1
Ethylbenzene	100-41-4	0.4
Naphthalene	91-20-3	0.3

Regular Mineral Spirits (RMS)**SECTION 2. HAZARDS IDENTIFICATION**

Also see Emergency Overview and Hazard Ratings on the top of Page 1 of this MSDS.

Major Route(s) of Entry Skin contact. Inhalation.

Signs and Symptoms of Acute Exposure

Inhalation Breathing high concentrations may be harmful. Mist or vapor can irritate the throat and lungs. Breathing this material may cause central nervous system depression with symptoms including nausea, headache, dizziness, fatigue, drowsiness, or unconsciousness. Breathing high concentrations of this material, for example, in an enclosed space or by intentional abuse, can cause irregular heartbeats which can cause death.

Eye Contact This product can cause transient mild eye irritation with short-term contact with liquid sprays or mists. Symptoms include stinging, watering, redness, and swelling.

Skin Contact This product can cause mild, transient skin irritation. The severity of irritation will depend on the amount of material that is applied to the skin and the speed and thoroughness that it is removed. Symptoms include redness, itching, and burning of the skin. Repeated or prolonged skin contact can produce moderate irritation (dermatitis).

Ingestion If swallowed, this material may irritate the mucous membranes of the mouth, throat, and esophagus. It can be readily absorbed by the stomach and intestinal tract. Symptoms include a burning sensation of the mouth and esophagus, nausea, vomiting, dizziness, staggering gait, drowsiness, loss of consciousness, and delirium, as well as additional central nervous system (CNS) effects. Due to its light viscosity, there is a danger of aspiration into the lungs during vomiting. Aspiration can result in severe lung damage or death.

Chronic Health Effects Summary Chronic effects of ingestion and subsequent aspiration into the lungs may cause pneumothorax (lung cavity) formation and chronic lung dysfunction.

Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage (sometimes referred to as "Solvent or Painter's Syndrome"). Intentional misuse by deliberately concentrating and inhaling this product may be harmful or fatal.

Conditions Aggravated by Exposure Disorders of the following organs or organ systems that may be aggravated by significant exposure to this material or its components include: Skin, Respiratory System, Liver, Kidneys, Central Nervous System (CNS)

Target Organs May cause damage to the following organs: kidneys, lungs, liver, mucous membranes, upper respiratory tract, skin, central nervous system (CNS), eye, lens or cornea

Carcinogenic Potential This material may contain ethylbenzene and naphthalene at concentrations above 0.1%. IARC has identified ethylbenzene and naphthalene as possibly carcinogenic to humans (Group 2B) based on laboratory animal studies. The NTP has determined that naphthalene is reasonably anticipated to be a human carcinogen based on sufficient evidence from studies in experimental animals.

OSHA Hazard Classification is indicated by an "X" in the box adjacent to the hazard title. If no "X" is present, the product does not exhibit the hazard as defined in the OSHA Hazard Communication Standard (29 CFR 1910.1200).

OSHA Health Hazard Classification			OSHA Physical Hazard Classification		
Irritant	<input checked="" type="checkbox"/>	Sensitizer	<input type="checkbox"/>	Combustible	<input checked="" type="checkbox"/>
Toxic	<input type="checkbox"/>	Highly Toxic	<input type="checkbox"/>	Flammable	<input type="checkbox"/>
Corrosive	<input type="checkbox"/>	Carcinogenic	<input type="checkbox"/>	Compressed Gas	<input type="checkbox"/>
				Explosive	<input type="checkbox"/>
				Quelcher	<input type="checkbox"/>
				Organic Peroxide	<input type="checkbox"/>
				Pyrophoric	<input type="checkbox"/>
				Water-reactive	<input type="checkbox"/>
				Unstable	<input type="checkbox"/>

Regular Mineral Sprink (TOWS)**SECTION 4. FIRST AID MEASURES**

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid. For more specific information, refer to Exposure Controls and Personal Protection in Section 8 of this MSDS.

Inhalation

Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.

Eye Contact

Flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. If easily accomplished, check for and remove contact lenses. If contact lenses cannot be removed, seek immediate medical attention. Do not use eye ointment. Seek medical attention.

Skin Contact

Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damaged or if pain or irritation persists.

Ingestion

Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

Notes to Physician

INHALATION: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonia. Administer supplemental oxygen with assisted ventilation, as required.

INGESTION: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

SECTION 5. FIRE FIGHTING MEASURES**NFPA Flammability Classification**

NFPA Class-II combustible liquid.

Flash Point

Closed cup: 42°C (108°F). (Tagliabue (ASTM D-56))

Lower Flammable Limit AP 0.5 %

Upper Flammable Limit AP 8 %

Autoignition Temperature

230°C (446°F)

Hazardous Combustion Products

Carbon dioxide, carbon monoxide, smoke, fumes, and/or unburned hydrocarbons.

Special Properties

Combustible Liquid: This material releases vapors when heated above ambient temperatures. Vapors can cause a flash fire. Vapors can travel to a source of ignition and flashback. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. Use only with adequate ventilation. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media

SMALL FIRE: Use dry chemicals, carbon dioxide, foam, or inert gas (nitrogen). Carbon dioxide and inert gas can displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.
LARGE FIRE: Use foam, water fog, or water spray. Water fog and spray are effective in cooling containers and adjacent structures. However, water can cause frosting and/or may not extinguish the fire. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.

**Protection of Fire
fighters**

Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Evacuate area and fight the fire from a maximum distance or use unmanned hose holders or monitor nozzles. Cover pooling liquid with foam. Containers can build pressure if exposed to radiant heat; cool adjacent containers with flooding quantities of water until well after the fire is out. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines. Be aware that burning liquid will float on water. Notify appropriate authorities of potential fire and explosion hazard if liquid enters sewers or waterways.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Take proper precautions to ensure your own health and safety before attempting spill control or clean-up. For more specific information, refer to the Emergency Overview on Page 1, Exposure Controls and Personal Protection in Section 8 and Disposal Considerations in Section 13 of this MSDS.

Combustible Liquid: Release causes an immediate fire or explosion hazard. Evacuate all non-essential personnel from immediate area and establish a "regulated zone" with site control and security. A vapor-suppressing team may be used to reduce vapors. Eliminate all ignition sources. All equipment used when handling this material must be grounded. Stop the leak if it can be done without risk. Do not touch or walk through spilled material. Remove spillage immediately from hard, smooth walking areas. Prevent its entry into waterways, sewers, basements, or confined areas. Absorb or cover with dry earth, sand, or other non-combustible material and transfer to appropriate waste containers. Use clean, non-sparking tools to collect absorbed material.

For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Water mist or spray may be used to reduce or disperse vapors; but, it may not prevent ignition in closed spaces. This material will float on water and its run-off may create an explosion or fire hazard. Verify that responders are properly HAZWOPER-trained and wearing appropriate respiratory equipment and fire-resistant protective clothing during cleanup operations. In an urban area, cleanup spill as soon as possible; in natural environments, cleanup on advice from specialists. Pick up free liquid for recycle and/or disposal if it can be accomplished safely with explosion-proof equipment. Collect any excess material with absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal. Comply with all laws and regulations.

SECTION 7. HANDLING AND STORAGE**Handling**

A spill or leak can cause an immediate fire or explosion hazard. Keep containers closed and do not handle or store near heat, sparks, or any other potential ignition sources. Do not contact with oxidizable materials. Do not breathe vapor. Use only with adequate ventilation and personal protection. Never siphon by mouth. Avoid contact with eyes, skin, and clothing. Prevent contact with food and tobacco products. Do not take internally.

When performing repairs and maintenance on contaminated equipment, keep unnecessary persons away from the area. Eliminate all potential ignition sources. Drain and purge equipment, as necessary, to remove material residue. Follow proper entry procedures, including compliance with 29 CFR 1910.146 prior to entering confined spaces such as tanks or pits. Use gloves constructed of impervious materials and protective clothing if direct contact is anticipated. Provide ventilation to maintain exposure potential below applicable exposure limits. Use appropriate respiratory protection when concentrations exceed any established occupational exposure level (See Section 8). Promptly remove contaminated clothing. Wash exposed skin thoroughly with soap and water after handling.

A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always bond receiving containers to the fill pipe before and during loading. Always keep nozzle in contact with the container throughout the loading process. Do not fill any portable container in or on a vehicle. Do NOT use

REGULAR INDUSTRIAL OPERATIONS

compressed air for filling, discharging or other handling operations.

Product container is not designed for elevated pressure. Do not pressurize, cut, weld, braze, solder, drill, or grind on containers. Do not expose product containers to flames, sparks, heat or other potential ignition sources. Empty containers may contain product residues that can ignite with explosive force. Observe label precautions. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers and/or waste residues of this product.

Storage

Keep container closed. Store in a cool, dry, well-ventilated area. Do not store with oxidizing agents. Do not store at elevated temperatures or in direct sunlight for extended periods of time. Consult appropriate federal, state and local authorities before reusing, reconditioning, reclaiming, recycling or disposing of empty containers or waste residues of this product.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Provide ventilation or other engineering controls to keep the airborne concentrations of vapor or mist below the applicable workplace exposure limits indicated below. All electrical equipment should comply with the National Electric Code. An emergency eye wash station and safety shower should be located near the work station.

Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required.

**Eye Protection**

Safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Chemical goggles should be worn during transfer operations or when there is a likelihood of misting, splashing, or spraying of this material. A suitable emergency eye wash water and safety shower should be located near the work station.

Hand Protection

Avoid skin contact. Use heavy duty gloves constructed of chemical resistant materials such as Viton® or heavy nitrile rubber. Wash hands with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities or leaving work. DO NOT use gasoline, kerosene, solvents or harsh abrasives as skin cleaners.

Body Protection

Avoid skin contact. Wear long-sleeved fire-retardant garments (e.g., Nomex®) while working with flammable and combustible liquids. Additional chemical-resistant protective gear may be required if splashing or spraying conditions exist. This may include an apron, boots and additional facial protection. If product comes in contact with clothing, immediately remove soaked clothing and shower. Promptly remove and discard contaminated leather goods.

Respiratory Protection

For known vapor concentrations above the occupational exposure guidelines (see below), use a NIOSH-approved organic vapor respirator if adequate protection is provided. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134). For airborne vapor concentrations that exceed the recommended protection factors for organic vapor respirators, use a full-face, positive-pressure, supplied air respirator. Due to fire and explosion hazards, do not enter atmospheres containing concentrations greater than 10% of the lower flammable limit of this product.

General Comments

Warning! Use of this material in spaces without adequate ventilation may result in generation of hazardous levels of flammable vapors and/or inadequate oxygen levels for breathing. Ogor is an inadequate warning for hazardous conditions.

Occupational Exposure Guidelines

Regular Mineral Spirits (RMS)**Substance**

odorless Solvent

methylbenzenes, all isomers

ylene, all isomers

xylene

methylbenzene

naphthalene

Applicable Workplace Exposure Levels

ACGIH TLV (United States)

TWA: 100 ppm 8 hour(s)

OSHA PEL 22 (United States)

TWA: 500 ppm 8 hour(s)

ACGIH (United States)

TWA: 25 ppm 8 hour(s)

ACGIH (United States)

TWA: 100 ppm 8 hour(s)

STEL: 150 ppm 15 minute(s)

OSHA (United States)

TWA: 100 ppm 8 hour(s)

ACGIH (United States)

TWA: 50 ppm 8 hour(s)

OSHA (United States) Skin

TWA: 50 ppm 8 hour(s)

ACGIH (United States)

TWA: 100 ppm 8 hour(s)

STEL: 125 ppm 15 minute(s)

OSHA (United States)

TWA: 100 ppm 8 hour(s)

ACGIH (United States) Skin

TWA: 10 ppm 8 hour(s)

STEL: 15 ppm 15 minute(s)

OSHA (United States)

TWA: 10 ppm 8 hour(s)

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES (TYPICAL)

Physical State	Liquid	Color	Transparent, colorless	Odor	Characteristic hydrocarbon solvent odor.
Specific Gravity	0.78 (Water = 1)	pH	Not applicable	Vapor Density	4.7 (Air = 1)
Boiling Range	148 to 204°C (298 to 400°F)			Melting/Freezing Point	Not available.
Vapor Pressure	0.22 mm Hg at 20°C (68°F) using an isoteniscope.			Volatility	784 g/l VOC (w/v)
Solubility in Water	Very slightly soluble in cold water. (<0.1 % w/w)			Viscosity (cSt @ 40°C)	Not available.
Flash Point	Closed cup: 42°C (108°F). (Tagliabue (ASTM D-56))				
Additional Properties	No additional information.				

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable.	Hazardous Polymerization	Not expected to occur.
Conditions to Avoid	Keep away from heat, flame and other potential ignition sources. Keep away from strong oxidizing conditions and agents.		
Materials Incompatibility	Strong acids, alkalis, and oxidizers such as liquid chlorine and oxygen.		
Hazardous Decomposition Products	No additional hazardous decomposition products were identified other than the combustion products identified in Section 9 of this MSDS.		

Regular Mineral Spins (RMS)**SECTION 11. TOXICOLOGICAL INFORMATION**

For other health-related information, refer to the Emergency Overview on Page 1 and the Hazards Identification in Section 2 of this MSDS.

Toxicity Data**Stoddard Solvent**

Dermal, Acute LD₅₀ (rabbit): >3000 mg/kg
Inhalation, Acute LC₅₀ (rat): >4.8 mg/l (8 hours)

Studies on laboratory animals have associated similar materials with eye and respiratory tract irritation. Studies on laboratory animals have shown similar materials to cause skin irritation after repeated or prolonged contact. Repeated direct application of Stoddard Solvent to the skin can produce defolting dermatitis and kidney damage in laboratory animals. Rats developed kidney damage and elevated blood urea nitrogen levels when exposed to a concentration of 1.9 mg/L for 85 days. The kidney damage occurred only in male rats and appeared to involve both the tubules and glomeruli. The significance of these animal study results to human health is unclear.

Trimethylbenzenes, all isomers**Studies of Workers:**

Levels of total hydrocarbon vapors present in the breathing atmosphere of these workers ranged from 10 to 60 ppm. The TLV for humans is 10 ppm, with somnolence and respiratory tract irritation noted.

Studies in Laboratory Animals:

In inhalation studies with rats, four of ten animals died after exposures of 2400 ppm for 24 hours. An oral dose of 5 mL/kg resulted in death in one of ten rats. Minimum lethal intraperitoneal doses were 1.5 to 2.0 mL/kg in rats and 1.12 to 12 mL/kg in guinea pigs. Mesitylene (1, 3, 5 Trimethylbenzene) inhalation at concentrations of 1.5, 3.0, and 6.0 mg/L for six hours was associated with dose-related changes in white blood cell counts in rats. No significant effects on the complete blood count were noted with six hours per day exposure for five weeks, but elevations of alkaline phosphatase and SGOT were observed. Central nervous system depression and ataxia were noted in rats exposed to 5,100 to 9,180 ppm for two hours.

Xylene, all isomers**Effects from Acute Exposure:**

ORAL (LD₅₀), Acute: 4,300 mg/kg (Rat).
INHALATION (LC₅₀), Acute: 4,500 ppm for four hours (Rat).
DERMAL (LD₅₀), Acute: 14,100 uL/kg (Rabbit).

Overexposure to xylene may cause upper respiratory tract irritation, headache, cyanosis, blood serum changes, CNS damage and narcosis. Effects may be increased by the use of alcoholic beverages. Evidence of liver and kidney impairment were reported in workers recovering from a gross over-exposure.

Effects from Prolonged or Repeated Exposure:

Impaired neurological function was reported in workers exposed to solvents including xylene. Studies in laboratory animals have shown evidence of impaired hearing following high levels of exposure. Studies in laboratory animals suggest some changes in reproductive organs following high levels of exposure but no significant effects on reproduction were observed. Studies in laboratory animals indicate skeletal and visceral malformations, developmental delays, and increased fetal resorptions following extremely high levels of maternal exposure. Adverse effects on the liver, kidney, bone marrow (changes in blood cell parameters) were observed in laboratory animals following high levels of exposure. The relevance of these observations to humans is not clear at this time.

Ethylbenzene**Effects from Acute Exposure:**

ORAL (LD₅₀), Acute: 3,500 mg/kg (Rat).
DERMAL (LD₅₀), Acute: 17,800 uL/kg (Rabbit).

Regular Mineral Spirits (RMS)

INTRAPERITONEAL (LD50), Adult: 2,624 mg/kg (Rat).

Effects from Prolonged or Repeated Exposure:

Findings from a 2-year inhalation study in rodents conducted by NTP were as follows: Effects were observed only at the highest exposure level (750 ppm). At this level the incidence of renal tumors was elevated in male rats (tubular carcinomas) and female rats (tubular adenomas). Also, the incidence of tumors was elevated in male mice (alveolar and bronchiolar carcinomas) and female mice (hepatocellular carcinomas). IARC has classified ethyl benzene as "possibly carcinogenic to humans" (Group 2B). Studies in laboratory animals indicate some evidence of post-implantation deaths following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate limited evidence of fetal malformations, resorptions, and developmental delays following high levels of maternal exposure. The relevance of these findings to humans is not clear at this time. Studies in laboratory animals indicate some evidence of adverse effects on the liver, kidney, thyroid, and pituitary gland.

Naphthalene**Studies in Humans Overexposed to Naphthalene:**

Severe jaundice, neurotoxicity (hemolysis) and fatalities have been reported in young children and infants as a result of hemolytic anemia from over-exposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have also been reported from over-exposure to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect.

Studies in Laboratory Animals:

Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) *in vitro*.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

This mixture contains components that are potentially toxic to freshwater and saltwater ecosystems.

Environmental Fate

This product will normally float on water. Components will evaporate rapidly. This material may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment. The octanol-water partition coefficient (log K_{ow}) for this product is expected to be in the range of 2.1 to 5.

SECTION 13. DISPOSAL CONSIDERATIONS

Hazard characteristic and regulatory waste stream classification can change with product use. Accordingly, it is the responsibility of the user to determine the proper storage, transportation, treatment and/or disposal methodologies for spent materials and residues at the time of disposition.

Maximize material recovery for reuse or recycling. Recovered non-usable material may be regulated by US EPA as a hazardous waste due to its ignitability (D001) and/or its toxic (D018) characteristics. Conditions of use may cause this material to become a "hazardous waste", as defined by federal or state regulations. It is the responsibility of the user to determine if the material is a RCRA "hazardous waste" at the time of disposal. Transportation, treatment, storage and disposal of waste material must be conducted in accordance with RCRA regulations (see 40 CFR 260 through 40 CFR 271). State and/or local regulations may be more restrictive. Contact your regional US EPA office for guidance concerning case specific disposal issues.

Regular numerical digits (run)

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside of the United States.

JS DOT Status A U.S. Department of Transportation (DOT) regulated material.
Proper Shipping Name Petroleum Distillates, n.o.s. (Naphtha Solvent), 3, UN1268 PG III
Hazard Class DOT Class: 3 (Flammable liquid), Packing Group PG III
UNNA Number UN1268
Reportable Quantity RQ 2,500 lbs. (360 gallons) [Based upon maximum Xylene concentration of 4% and an RQ of 100 lbs.]

Placard(s)

Emergency Response Guide No. 128
MARPOL III Status Not available.

SECTION 15. REGULATORY INFORMATION

TSCA Inventory This product and/or its components are listed on the Toxic Substances Control Act (TSCA) inventory.

SARA 302/304 Emergency Planning and Notification The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to Subparts 302 and 304 to submit emergency planning and notification information based on Threshold Planning Quantities (TPQs) and Reportable Quantities (RQs) for "Extremely Hazardous Substances" listed in 40 CFR 302.4 and 40 CFR 355. No components were identified.

SARA 311/312 Hazard Identification The Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires facilities subject to this subpart to submit aggregate information on chemicals by "Hazard Category" as defined in 40 CFR 370.2. This material would be classified under the following hazard categories:
 Irs, Acute (Immediate) Health Hazard, Chronic (Delayed) Health Hazard

SARA 313 Toxic Chemical Notification and Release Reporting This product contains the following components in concentrations above de minimis levels that are listed as toxic chemicals in 40 CFR Part 372 pursuant to the requirements of Section 313 of SARA:
 Naphthalene [CAS No.: 91-20-3] Concentration: <0.3%
 Ethylbenzene [CAS No.: 100-41-4] Concentration: <0.2%

CERCLA The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center concerning release of quantities of "hazardous substances" equal to or greater than the reportable quantities (RQs) listed in 40 CFR 302.4. As defined by CERCLA, the term "hazardous substance" does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically designated in 40 CFR 302.4. Chemical substances present in this product or refinery stream that may be subject to this status are:
 Xylene, all isomers [CAS No.: 1330-20-7] RQ = 100 lbs. (45.36 kg) Concentration: <4%
 Cumene [CAS No.: 98-82-8] RQ = 5000 lbs. (2268 kg) Concentration: <1%
 Naphthalene [CAS No.: 91-20-3] RQ = 100 lbs. (45.36 kg) Concentration: <0.3%

Clean Water Act (CWA) This material is classified as an oil under Section 311 of the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). Discharges or spills which produce a visible sheen on waters of the United States, their adjoining shorelines, or into conduits leading to surface waters must be reported to the EPA's National Response Center at (800) 424-8802.

Regular Mineral Spirits (RMS)**California
Proposition 65**

This material may contain the following components which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 26249.5):

Ethylbenzene: <0.4%
Naphthalene: <0.3%
Toluene: <0.001%
Benzene: <0.0005%

**New Jersey
Right-to-Know Label**

For New Jersey R-T-K labeling requirements, refer to components listed in Section 2.

Additional Remarks

Federal Hazardous Substances Act, related statutes, and Consumer Product Safety Commission regulations, as defined by 16 CFR 1500.14(b)(3) and 1500.63(a)(13). This product contains "Petroleum Distillates" which may require special labeling if distributed in a manner intended or packaged in a form suitable for use in the household or by children. Precautionary label dialogue should display the following: **DANGER: Corrosive Petroleum Distillates. Harmful or fatal if swallowed. Call Physician immediately. KEEP OUT OF REACH OF CHILDREN**

SECTION 16. OTHER INFORMATION

Refer to the top of Page 1 for the HMIS and NFPA Hazard Ratings for this product.

REVISION INFORMATION

Version Number 4.0
Revision Date 6/20/2007

ABBREVIATIONS

AP: Approximately EQ: Equal >: Greater Than <: Less Than
ACGIH: American Conference of Governmental Industrial Hygienists
IARC: International Agency for Research on Cancer
NIOSH: National Institute of Occupational Safety and Health
NPCA: National Paint and Coating Manufacturers Association
NFPA: National Fire Protection Association

NA: Not Applicable ND: No Data NE: Not Established
AIAA: American Industrial Hygiene Association
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
HMIS: Hazardous Materials Information System
EPA: US Environmental Protection Agency

DISCLAIMER OF LIABILITY

THE INFORMATION IN THIS MSDS WAS OBTAINED FROM SOURCES WHICH WE BELIEVE ARE RELIABLE. HOWEVER, THE INFORMATION IS PROVIDED WITHOUT ANY WARRANTY, EXPRESSED OR IMPLIED REGARDING ITS CORRECTNESS. SOME INFORMATION PRESENTED AND CONCLUSIONS DRAWN HEREIN ARE FROM SOURCES OTHER THAN DIRECT TEST DATA ON THE SUBSTANCE ITSELF. THIS MSDS WAS PREPARED AND IS TO BE USED ONLY FOR THIS PRODUCT. IF THE PRODUCT IS USED AS A COMPONENT IN ANOTHER PRODUCT, THIS MSDS INFORMATION MAY NOT BE APPLICABLE. USERS SHOULD MAKE THEIR OWN INVESTIGATIONS TO DETERMINE THE SUITABILITY OF THE INFORMATION OR PRODUCTS FOR THEIR PARTICULAR PURPOSE.

THE CONDITIONS OR METHODS OF HANDLING, STORAGE, USE, AND DISPOSAL OF THE PRODUCT ARE BEYOND OUR CONTROL AND MAY BE BEYOND OUR KNOWLEDGE. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH HANDLING, STORAGE, USE OR DISPOSAL OF THE PRODUCT.

***** END OF MSDS *****

**Kendall NS-MP Hypoid
Gear Lube 80W90**

(MSDS #7730080900)

Page 1 of 7

**MATERIAL SAFETY DATA SHEET****Kendall NS-MP Hypoid Gear Lube 80W90****1. PRODUCT AND COMPANY IDENTIFICATION**

Product Name: Kendall NS-MP Hypoid Gear Lube 80W90
Product Code: 7730080900
Sap Code:
Intended Use: Gear lubricant
Chemical Family: Petroleum Hydrocarbon
Responsible Party: Phillips 66 Company
Lubricants Division
P.O. Box 25376
Santa Ana, CA 92799-5376

For Additional MSDSs: 800-762-0942**Technical Information:**

The Intended use of this product is indicated above. If any additional use is known, please contact us at the Technical Information number listed.

EMERGENCY OVERVIEW**24 Hour Emergency Telephone Numbers:**

Spill, Leak, Fire or Accident

California Poison Control System: (800) 356-3129

Call CHEMTREC

North America: (800)424-9300

Others: (703)527-3887 (collect)

Health Hazards/Precautionary Measures: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Physical Hazards/Precautionary Measures: Keep away from all sources of ignition.

Appearance: Clear brown
Physical Form: Liquid
Odor: Characteristic Petroleum

NFPA Hazard Class:**HMIS Hazard Class**

Health: 1 (Slight)
Flammability: 1 (Slight)
Reactivity: 0 (Least)

Not Evaluated

2. COMPOSITION/INFORMATION ON INGREDIENTS

No hazardous components identified per 29 CFR 1910.1200.

OTHER COMPONENTS**% VOLUME****EXPOSURE GUIDELINE**

		<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Lubricant Base Oil (Petroleum)	87-97	(See: Oil Mist, If Generated)		

Kendall NS-MP Hypoid (MSDS #7730080900)
Gear Lube 80W90

Page 2 of 7

CAS# Various

Additives 3-13 Not Established
CAS# Proprietary

REFERENCE

EXPOSURE GUIDELINE

	<u>Limits</u>	<u>Agency</u>	<u>Type</u>
Oil Mist, If Generated	5 mg/m3	ACGIH	TWA
CAS# None	10 mg/m3	ACGIH	STEL
	5 mg/m3	OSHA	TWA
	2500 mg/m3	NIOSH	IDLH

All components are listed on the TSCA inventory

The base oil for this product can be a mixture of any of the following highly refined petroleum streams:
CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS
64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS
64742-63-8; CAS 64742-65-0; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1

Note: State, local or other agencies or advisory groups may have established more stringent limits.
Consult an industrial hygienist or similar professional, or your local agencies, for further information.

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness, and a burning sensation. Prolonged or repeated contact can worsen irritation by causing drying and cracking of the skin leading to dermatitis (inflammation). No harmful effects from skin absorption are expected.

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion (Swallowing): No harmful effects expected from ingestion.

Signs and Symptoms: Effects of overexposure may include irritation of the nose and throat, irritation of the digestive tract, nausea and diarrhea.

Cancer: Inadequate evidence available to evaluate the cancer hazard of this material. See Section 11 for carcinogenicity information of individual components, if any.

Target Organs: No data available for this material.

Developmental: No data available for this material.

Pre-Existing Medical Conditions: Conditions aggravated by exposure may include skin disorders.

4. FIRST AID MEASURES

Kendall NS-MP Hypoid (MSDS #7730080900)
Gear Lube 80W90

Page 3 of 7

Eye: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin: Wipe material from skin and remove contaminated shoes and clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water and, if necessary, a waterless skin cleanser. If irritation or redness develops and persists, seek medical attention.

Inhalation (Breathing): If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion (Swallowing): First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Note To Physicians: High-pressure hydrocarbon injection injuries may produce substantial necrosis of underlying tissue despite an innocuous appearing external wound. Often these injuries require extensive emergency surgical debridement and all injuries should be evaluated by a specialist in order to assess the extent of injury.

Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

5. FIRE FIGHTING MEASURES

Flammable Properties: Flash Point: 352°F/178°C (COC)
OSHA Flammability Class: Not applicable
LEL/UEL%: No Data
Autoignition Temperature: No Data

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Fire Fighting Instructions: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear bunker gear. When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required by DOT, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from immediate hazard area if it can be done with minimal risk.

Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Wear appropriate protective equipment including respiratory protection as conditions warrant (see Section 8).

Kendall NS-MP Hypoid (MSDS #7730080900)
Gear Lube 80W90

Page 4 of 7

Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Dike far ahead of spill for later recovery or disposal. Spilled material may be absorbed into an appropriate absorbent material.

Notify fire authorities and appropriate federal, state, and local agencies. Immediate cleanup of any spill is recommended. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, notify the National Response Center (phone number 800-424-8802).

7. HANDLING AND STORAGE

Handling: Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. The use of appropriate respiratory protection is advised when concentrations exceed any established exposure limits (see Sections 2 and 8).

Do not wear contaminated clothing or shoes. Use good personal hygiene practices.

High pressure injection of hydrocarbon fuels, hydraulic oils or greases under the skin may have serious consequences even though no symptoms or injury may be apparent. This can happen accidentally when using high pressure equipment such as high pressure grease guns, fuel injection apparatus or from pinhole leaks in tubing of high pressure hydraulic oil equipment.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1 and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

Storage: Keep container(s) tightly closed. Use and store this material in cool, dry, well-ventilated areas away from heat and all sources of ignition. Storage temperatures above 113°F may lead to thermal decomposition, resulting in the generation of hydrogen sulfide and other sulfur containing gases. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits (see Section 2), additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: A NIOSH certified air purifying respirator with a Type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits (see Section 2).

Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Skin: The use of gloves impervious to the specific material handled is advised to prevent skin contact and possible irritation (see manufacturers literature for information on permeability).

Kendall NS-MP Hypoid (MSDS #7730080900)
Gear Lube 80W90

Page 5 of 7

Eye/Face: Approved eye protection to safeguard against potential eye contact, irritation, or injury is recommended. Depending on conditions of use, a face shield may be necessary.

Other Protective Equipment: A source of clean water should be available in the work area for flushing eyes and skin. Impervious clothing should be worn as needed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm).

Appearance: Clear brown
Physical State: Liquid
Odor: Characteristic Petroleum
pH: Not applicable
Vapor Pressure (mm Hg): <1
Vapor Density (air=1): >1
Boiling Point/Range: >555°F / >291°C
Freezing/Melting Point: No Data
Solubility in Water: Negligible
Specific Gravity: 0.88-0.90
Percent Volatile: Negligible
Evaporation Rate (nBuAc=1): <1
Viscosity: 13.8-14.3 cSt @ 100°C
Bulk Density: 7.46 lbs/gal
Flash Point: 352°F / 178°C (COC)
Flammable/Explosive Limits (%): No Data

10. STABILITY AND REACTIVITY

Stability: Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Conditions To Avoid: Extended exposure to high temperatures can cause decomposition.

Materials to Avoid (Incompatible Materials): Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: Combustion can yield carbon, nitrogen and sulfur oxides. . Hydrogen sulfide and alkyl mercaptans may also be released.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Lubricant Base Oil (Petroleum) (CAS# Various)

Carcinogenicity: The petroleum base oils contained in this product have been highly refined by a variety of processes including solvent extraction, hydrotreating, and dewaxing to remove aromatics and improve performance characteristics. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA.

12. ECOLOGICAL INFORMATION

Not evaluated at this time

Kendall NS-MP Hypoid (MSDS #7730080900)
Gear Lube 80W90

Page 6 of 7

13. DISPOSAL CONSIDERATIONS

This material under most intended uses would become used oil due to contamination by physical or chemical impurities. RECYCLE ALL USED OIL. While being recycled, used oil is regulated by 40 CFR 279. Use resulting in chemical or physical change or contamination may also subject it to regulation as hazardous waste. Under federal regulations, used oil is a solid waste managed under 40 CFR 279. However, in California, used oil is managed as hazardous waste until tested to show it is not hazardous. Consult state and local regulations regarding the proper handling of used oil. In the case of used oil, the intent to discard it may cause the used oil to be regulated as hazardous waste.

Contents should be completely used and containers emptied prior to discard. Rinsate may be considered a RCRA hazardous waste and must be disposed of with care and in compliance with federal, state and local regulations. Large empty containers, such as drums, should be returned to the distributor or a drum reconditioner. To assure proper disposal of small empty containers, consult with state and local regulations and disposal authorities.

14. TRANSPORT INFORMATION

Note: Not classified as hazardous

15. REGULATORY INFORMATION

EPA SARA 311/312 (Title III Hazard Categories):

Acute Health: No
Chronic Health: No
Fire Hazard: No
Pressure Hazard: No
Reactive Hazard: No

SARA 313 and 40 CFR 372:

This material contains the following chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372:

—None—

California Proposition 65:

Warning: This material contains the following chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm, and are subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

—None Known—

Carcinogen Identification:

This material has not been identified as a carcinogen by NTP, IARC, or OSHA. See Section 11 for carcinogenicity information of individual components, if any.

EPA (CERCLA) Reportable Quantity:

—None—

16. OTHER INFORMATION

Issue Date: 01/01/02
Previous Issue Date: 09/24/01
Product Code: 7730080900
Revised Sections: 1, 3, 4, 7, 9, 10, 12, 13, 14
Previous Product Code: 7730080900
MSDS Number: 7730080900

Disclaimer of Expressed and Implied Warranties:

0047

Kendall NS-MP Hypoid (MSDS #7730080900)
Gear Lube 80W90

Page 7 of 7

The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.